AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1. (Previously Presented) A structure comprising a substrate having a surface, a release layer on the surface of the substrate and a first uniform optical material on top of the release layer, the release layer comprising partly sintered powders.

2. (Original) The structure of claim 1 wherein the first uniform optical material comprises a glass.

3. (Original) The structure of claim 1 wherein the first uniform optical material comprises a silica glass.

4. (Original) The structure of claim 3 wherein the silica glass is doped.

5. (Previously Presented) The structure of claim 1 wherein the first uniform optical material comprises a crystalline material.

6. (Original) The structure of claim 1 wherein the substrate comprises elemental silicon.

7. (Previously Presented) The structure of claim 1 wherein the release layer has the same chemical composition as the first uniform optical material.

8. (Previously Presented) The structure of claim 1 wherein the release layer has a different chemical composition from the first uniform optical material.

9. (Original) The structure of claim 1 wherein the release layer comprises SiO_2.

10. (Original) The structure of claim 1 wherein the release layer has an average thickness along the substrate surface from about 0.5 microns to about 30 microns.

11. (Previously Presented) The structure of claim 1 wherein the first uniform optical material has an average thickness along the release layer from about 1 micron to about 50 microns.

12. (Previously Presented) The structure of claim 1 wherein the first uniform optical material has an average thickness along the release layer from about 3 micron to about 20 microns.

13. (Previously Presented) The structure of claim 1 wherein the release layer and the first uniform optical material extend over no more than about 50 percent of the area of the substrate surface.

14. (Previously Presented) The structure of claim 1 further comprising a second uniform optical material in contact with the first material, wherein the second uniform optical material has different optical properties from the first uniform optical material.

15. (Previously Presented) The structure of claim 14 wherein the release layer is located between the second uniform optical material and the substrate.

16. (Original) A method for transferring a layer of uniform material to a receiving substrate surface, the method comprising applying separation forces to transfer to the receiving substrate an uniform material from a transfer material in contact with the receiving substrate surface, the transfer material comprising the structure of claim 1 wherein the layer of transferred material comprises the first uniform material of the transfer material.

17. (Original) The method of claim 16 wherein the separation forces comprise heat.

18. (Original) The method of claim 17 wherein the separation forces comprise shear.

19. (Original) The method of claim 17 wherein the separation forces are supplied with light.

20. (Currently Amended) A structure comprising a substrate having a surface and an optical material having an average thickness from about 3 microns to about 50 microns, which is located on

a substrate surface, wherein the optical material is free of stress and wherein the optical material comprises metal/metalloid oxides, metal/metalloid carbides, metal/metalloid nitrides, [[and]] metal/metalloid sulfides, doped metal/metalloid compounds or crystalline metal/metalloid compounds.

21. (Original) The structure of claim 20 wherein the optical material is free of birefringence.

22. (Original) The structure of claim 20 wherein the optical material comprises a silica glass.

23. (Original) The structure of claim 22 wherein the substrate comprises silicon.

24. (Original) The structure of claim 20 wherein a release layer is between the silica glass and the silicon.

25. (Original) The structure of claim 20 wherein the substrate comprises a release layer, which is contacting the optical material.

26. (Original) A method for forming a structure with a uniform material on a substrate with a release layer between the uniform material and the substrate, the method comprising:

1) depositing a layer of powder on a substrate, the powder in the layer having a lower sintering temperature at the top than the powder in the layer adjacent the substrate; and

2) heating the powder layers to convert the top of the powder layer to a uniform material

while the powder layer adjacent the substrate becomes a release layer.

27. (Original) The method of claim 26 wherein the powder layer adjacent the substrate comprises silicon dioxide.

28. (Original) The method of claim 26 wherein the powder layer comprises doped silicon dioxide.

29. (Original) The method of claim 26 wherein the heating is performed in an oven.

30. (Original) The method of claim 26 wherein the powder layer is deposited by light reactive deposition.

31. (Original) A method for forming a uniform material on a substrate surface with a release layer between the uniform material and the substrate, the method comprising heating a powder coating on the surface of the substrate from above to produce the uniform material the surface and a release layer between the substrate surface and the uniform optical material.

32. (Original) The method of claim 31 wherein the powder has uniform composition.

33. (Original) The method of claim 31 wherein the composition of the powder changes from the surface of the substrate to the surface of the powder layer.

34. (Original) The method of claim 33 wherein the change in composition is gradual.

35. (Original) The method of claim 33 wherein the change in composition is abrupt.

36. (Previously Presented) A substrate-less planar optical structure comprising a plurality of optical glass layers with different indices-of-refraction from each other, an average thickness through the entire structure being no more than about 1 mm.

37. (Original) The substrate-less planar optical structure of claim 36 wherein at least one layer is localized with respect to the planar extent of the layer.

38. (Original) The substrate-less planar optical structure of claim 36 wherein the plurality of optical layers include a waveguide.

39. (Original) The substrate-less planar optical structure of claim 36 wherein the plurality of optical layers includes integrated optical devices.

40. (Previously Presented) A structure comprising a substrate having a surface, a release layer on the surface of the substrate and a first uniform optical material on top of the release layer, the release layer including powders or partly sintered powders, wherein the release layer has the same chemical composition as the first uniform material.

41. (Previously Presented) The substrate-less planar optical structure of claim 36 wherein a planar projection of the structure with a maximum surface area has a minimum edge-to-edge distance of a segment passing through the center of the projected area of at least about 1 cm.